

Boston University Cyber Security Team



[Prof. David Starobinski](#) [Prof. Gianluca Stringhini](#) [Prof. Ari Trachtenberg](#)

Areas of expertise:

- Software management (design, CI/CD, distribution)
- Modeling and measurements of live complex systems (Internet, social networks, mobile systems, blockchains, etc.)
- Data-driven methods to understand and mitigate online malicious activity (cybercrime, online harassment, trolling, disinformation)
- System security with an application to web and mobile systems
- Malware analysis and mitigation
- Threat modeling
- Penetration testing
- Game theory and network economics
- Side-channel analysis
- Knowledge graphs

Awards and honors:

- NSF CAREER Award (each team member)
- ECE Award for teaching excellence (each team member)
- Numerous best paper awards and honorable mentions (IEEE CNS 2016, ACM IMC 2018, IEEE ICBC 2020, ACM CCS 2022)
- Members of editorial boards and programming committees of top security venues (e.g., IEEE Transactions on Information Forensics and Security, IEEE S&P, USENIX Security, NDSS, ACM CCS, ACM IMC)

Relevant Publications (in reverse chronological order):

1. Mohammed Naseri, Yufei Han, Enrico Mariconti, Yun Shen, **Gianluca Stringhini**, and Emiliano De Cristofaro. "CERBERUS: Exploring Federated Prediction of Security Events." In *2022 ACM SIGSAC Conference on Computer and Communications Security (CCS)*, pp. 2336-2351, 2022.
2. Shen, Yun, Pierre-Antoine Vervier, and **Gianluca Stringhini**. "A Large-scale Temporal Measurement of Android Malicious Apps: Persistence, Migration, and Lessons Learned." In *31st USENIX Security Symposium (USENIX Security 22)*, pp. 1167-1184. 2022.
3. Shi, Zhenpeng, Nikolay Matyunin, Kalman Graffi, and **David Starobinski**. "Uncovering Product Vulnerabilities with Threat Knowledge Graphs." In *2022 IEEE Secure Development Conference (SecDev)*, pp. 84-90. IEEE, 2022.
4. Shi, Zhenpeng, Kalman Graffi, **David Starobinski**, and Nikolay Matyunin. "Threat modeling tools: A taxonomy." *IEEE Security & Privacy* 20, no. 4 (2021): 29-39.
5. Imtiaz, Muhammad Anas, **David Starobinski**, and **Ari Trachtenberg**. "Characterizing orphan transactions in the Bitcoin network." In *2020 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*, pp. 1-9. IEEE, 2020 (**Best paper award**).
6. Canetti, Ran, Yael Tauman Kalai, Anna Lysyanskaya, Ronald L. Rivest, Adi Shamir, Emily Shen, **Ari Trachtenberg**, Mayank Varia, and Daniel J. Weitzner. "Privacy-preserving automated exposure notification." *Cryptology ePrint Archive* (2020)
7. Zannettou, Savvas, Tristan Caulfield, Emiliano De Cristofaro, Michael Sirivianos, **Gianluca Stringhini**, and Jeremy Blackburn. "Disinformation warfare: Understanding state-sponsored trolls on Twitter and their influence on the web." In *Companion proceedings of the 2019 world wide web conference*, pp. 218-226. 2019.
8. Kolodenker, Eugene, William Koch, **Gianluca Stringhini**, and Manuel Egele. "Paybreak: Defense against cryptographic ransomware." In *Proceedings of the 2017 ACM on Asia Conference on Computer and Communications Security*, pp. 599-611. 2017.
9. Spensky, Chad, Jeffrey Stewart, Arkady Yerukhimovich, Richard Shay, **Ari Trachtenberg**, Rick Housley, and Robert K. Cunningham. "Sok: Privacy on mobile devices—it's complicated." *Proceedings on Privacy Enhancing Technologies* 2016, no. 3 (2016): 96-116.